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17. ABSTRACT (MAX. 250 WORDS)

The use of the opaque projector seems to be an effective aid for developing good visual discrimination, language awareness and reading skills in imagery formation, speed, phrasing, intonation and eye movement. It should be part of a well-rounded program including the recognized techniques for teaching culturally disadvantaged children.

Reading material used in the projector is usually read by either the teacher (using a marker for children to follow) or the group in chorus. With this type of support the children are not afraid to try, and the visual and auditory elements are continually reinforcing each other.

Many uses for the projector are listed for kindergarten, first and second grade. Flash cards can be used to develop speed , and the use of markers or pointers is beneficial. Young children's eyes are usually far-sighted when they are maturing; therefore, the use of the enlarged image on a screen would help first graders overcome this handicap. The darkened room reduces diverting stimulation. For the culturally deprived, the projector can also provide remediation for their lack of visual experiences.

Other advantages of this technique are that it relieves pressure on slower readers, it allows exposure to many books since only one of a kind is needed, and it is flexible and can be used in other curriculum areas. Above all, children respond to and enjoy this technique. It is clearly not a method in itself, but should be used as a supplement; its effectiveness will still depend on the teacher and her program. The results from the use of the projector have been encouraging. In all instances the experimental group's performance on standardized reading tests administered after a year of its use was significantly higher than the control group's.

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OAKLAND PUBLIC SCHOOLS
INTERAGENCY PROJECT

THE OPAQUE PROJECTOR

as used in a kindergarten and first grade

The use of the opaque projector seems to be an effective aid for developing good visual discrimination, language awareness and reading skills in imagery formation, speed, phrasing, intonation and eye movement. It is a technique which involves the children. It also has many uses for other curriculum areas and for extending interests.

Description of Use

The use of the opaque projector is by no means the whole reading program. Its effectiveness is dependent on an otherwise well-rounded program which should include the recognized techniques for culturally disadvantaged children.

1. involvement
2. reinforcement
3. multi-sensory approach

These factors are inherent in the use of the opaque projector as will be outlined here. With the projector, the reading program becomes flexible, highly stimulating, and varied enough to meet the needs of all children. Other appropriate enrichment materials which could be used are tape recorder, reading games and activities, typewriter, earphones for record player and tape recorder, etc.

All reading material used in the projector is usually either teacher read with a marker for children to follow, or is read by the group in chorus. Especially at first grade level it is important for children to get the feel and intonation of the language. With this type of support the children are not afraid to try to read. They follow better and the visual and auditory elements are continually reinforcing each other. This aspect, the visual and auditory interaction is very important and

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and is claimed to be a successful technique in itself[1]. Of course frequently the children should and will want to read individually. This should be encouraged only after some mastery of the material and basic reading skill. The children should not hear poor reading or reading with many errors. This is a negative reinforcement. Learning bad habits and errors in reading requires more relearning to eliminate.

Use in Kindergarten

In general the opaque projector is used to project —

1. picture books
2. beginning-to-read books such as rebus stories and participation stories
3. alphabet books
4. visual discrimination books and pictures
5. pictures for categorizing and labeling
6. books with labels
7. story books, (to be read to children and illustrations projected)
8. children's art work
9. letter cards - for matching games, naming and identifying capital and small letters
10. photographs of the children engaged in varied activities
11. dictated stories
12. science materials - leaves, bugs, etc.
13. things brought to share

Use in First and Second Grade

All of the above suggestions including the following are used —

1. phonics pictures
2. workbooks

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1 A Neurological Impress Method of Reading Instruction, R.G. Heckelman, Merced County, California

3. dictionaries
4. supplementary books
5. shared children's library books
6. easy-to-read books
7. Basic reading series
8. children's own work - arithmetic, stories, etc.
9. word cards and phrase cards
10. Dolch basic word cards
11. labels
12. children's name cards
13. handwriting samples

Many techniques are used for developing imagery, speed, good eye movement and phrasing.

1. Using flash cards inserted in projector and quickly removed. The timing can be varied speeding up to a split second. This develops speed, also imagery. For spelling, cards can be inserted and removed and the children are asked to spell the word, starting with small words and increasing size as the year progresses. This is a definite aid to spelling as the children can spell most of the words they can read by the end of the first grade.
2. Using a marker or pointer develops good eye movement and left to right progression. A variety of techniques for marking and pointing are most beneficial.
3. Good phrasing may be practiced by directing phrases with the hand as story is read or by marking phrases in pencil in the book to be projected. The use of phrase flash cards are also effective. They are inserted in one side and pushed through in the opposite direction the eye moves forcing left to right progression.

4. Speed and eye movement is developed through several techniques. The children are asked to read a specific line or sentence on the page, i.e. "the first line", etc., the projector is flashed on for a second, then the child is asked to say the sentence. This forces the child to skim the line quickly while it is being projected. Another method is to block off the words as the group is reading by interfering with the projected image forcing the children to look ahead of what they are reading. This is done by placing a hand or paper between the projector and screen in such a way as to black out the words moving across the page and staying one or more words ahead of the children depending on their ability.

Extending Interests

There are several ways the projector can be used in conjunction with the tape recorder and with photographs and pictures. A tape of children reading a story can be played while their illustrations are being projected. Also a tape of children's own stories can be played while photographs or illustrations are projected. This is especially appropriate after a trip. The children can make their own "home movies" using photographs of themselves with the simultaneous playing of their taped stories. They hear and see themselves at the same time.

Relation to Vision

The use of the opaque projector may have some side effects pertaining to visual acuity and visual perception. Although these are assumptions, they seem logical. While young children's eyes are maturing they are usually farsighted, so using the enlarged image on a screen would help first graders with this handicap. The problem of the restless child who may be wiggling because of eyestrain is eliminated.

We know that stimulation of one sensory modality can block out another. Using the projector cuts down other stimulation because of the darkened room and all children participating in one activity. (Individual and small group activities are certainly to be encouraged at other times.) It might be assumed that using the

projector could help develop good peripheral vision as the children are always seated in different locations in relation to the screen. Having the illuminated enlarged image might help eliminate other problems such as aniseikonia (differing image sizes) and hyperphoria (seeing at different levels with each eye). Also visual perceptual abilities such as figure ground and perceptual constancy might be improved.

The use of the projector may have specific applicability for lower socio-economic areas. Poor health might contribute to slow maturation of eyes therefore the enlarged image is particularly beneficial. Poor visual discrimination is a result of lack of visual stimulation in the home, and little exposure to other situations. In effect the projector could provide remediation of visual experiences thereby overcoming some of the handicaps of the culturally disadvantaged child.

Limitations

There are undoubtedly some limitations to the use of the opaque projector and some objections from anti-machine teaching factions, but it is clearly not a method in itself. It should be used as a supplement and its effectiveness will still depend on the teacher and her program. Also it retains many human elements so it is not as cold a technique as some might consider. In fact because of the support and security of having teacher and children read together, less anxiety must ensue.

To the observer the use of the projector might at some times seem remote and unrealistic, but it must be remembered that an adult observers' viewpoint at the back of the room is very different from the participating child in a group before the screen.

No doubt in the future as we use the projector some of the difficulties will be ironed out. For instance an adequate type of marker attachment is needed so the lines can be underlined as the children read. Thick books such as the basic reading books need to be bound in a looseleaf manner so they can be flat enough to focus clearly. Of course only one of each level need be found in that way. Another

objection has been that children do not learn to hold books and read in the normal way. This would only result from over-use of the projector. The program should include standard reading lessons with children holding books and should encourage children to do independent reading of library books.

Positive Factors

Obviously from the writer's viewpoint the positive points far outweigh the negative. The first point should be the most impressive.

1. Children respond and love this technique.
2. It encourages independent reading after books are shared in the projector.
3. Group choral reading allows children the chance to practice their newly acquired skill of reading.
4. Grouping is limited because of the group choral method.
5. If children are not reading, they are hearing and seeing the printed page and are being exposed.
6. There is no pressure on slower reader, which is often their main difficulty.
7. Because of the above two points, this method is highly individualized.
8. There is less anxiety - children are not afraid to make mistakes.
9. It allows exposure to many books, only one of a kind is needed.
10. It is flexible - can be used in other curriculum areas.
11. It focuses attention because of darkened room.
12. It is an auditory as well as visual technique with resulting interaction and reinforcement.
13. The group choral reading has linguistic aspects.
14. It develops good eye movement and speed.
15. It aids farsighted first graders.
16. It develops imagery and possibly visual perception.

Summary

In conclusion the opaque projector can be a stimulating and valuable addition to a primary reading program. It cannot be a method but should be considered one appropriate element in a varied and flexible program which contributes to children realizing their potential, a program which stresses involvement, reinforcement, and use of multi-sensory modalities.

The results from the use of the projector have been encouraging. It has been used for three years as an instructional aid in first grade, and in kindergarten as part of a language development program. The general feeling has been that it is a successful technique. This past year, 1963-64, the results of the projector program, supplemented with other aids, (such as tape recorder) have been measured. The evaluative study revealed that, of the experimental group of 25 students involved in the study, 92% were reading at grade level or above as measured by the Gates Primary Reading Tests. Approximately one-third achieved one year above grade level. A retesting of 20 members of the group following the summer vacation with the Stanford Primary Reading Test supported the earlier results obtained in May 1964. Of some interest is the fact that the group was tested with the Kuhlman-Anderson Intelligence Test and the mean of the group was 88.

This was an unselected group. Their reading performance was compared with grade level peers. Control matches were also selected from a neighboring school for an additional comparison. In all instances the experimental group's performance was significantly higher than the control groups.

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